User Manual

(TLT-2H GPS/GSM Motorcycle Tracker)

1. Introduction

The TLT-2H GPS/GSM Tracker is a Vehicle Positioning Device what based on GPS and GSM/GPRS technology . It's can transmit the Longitude and Latitude coordinates to your Mobile Phone by SMS. And you can find the detail location of this unit on the Google Map or other Map Software. Also The tracker can upload the positioning data to the server.through GPRS . So The user can look for Real-Time Location-Tracking, Historical Tracking through the Internet.

The GPS and GSM Antenna is internal of this unit. So it's very easy to installation. And It's can use for Car, Truck, Motorcycle ,Bicycle etc...

Before you use this unit, please spend some time to read the User Manual to know the operation way.

2.Features

1. Support GSM 850/900/1800/1900 MHz. Works worldwide!
2. High sensitivity, JRC low power GPS chipset!
3. Excellent for fixing the position even at a weak signal status, work well even in areas with limited sky view like urban canyons
4. Fast Signal Acquisition
5. Support single location and continuous tracking
6. Support alarm, have 3 preset phone number
7. Support check location and real-time and historical trajectory by SMS or Internet
8. SOS button send out exact location for immediate rescue/action.
9. Support cut-off electricity and oil function and recovery command
10. High reliability circuit design, in line with the automotive electronics industry standards

3. TLT-2H Picture

GSM/GPS/Power

3.1. Specification

GSM module	MTK Case, support 900/1800(850/1900 can option) Support the TCP protocol
GPS Chipset	JRC chipset
GPS sensitivity	-164dB
C/A Code	1.023MHz chip rate
Channels	210 channel all-in-view tracking
GPS frequency	L1,1575.42MHz
GPS Position Accuracy	2.5 meters, CEP
GSM Position Accuracy	Later will realize
Velocity Accuracy	0.1m/s
Time Accuracy	Synchronized to GPS time
Cold Start	35sec.,average
Hot Start	1sec.,average
Warm Start	30sec.,average
Altitude Limit	18,000 meters (60,000feet) max.
Velocity Limit	515 meters/second (1000knots) max.
Acceleration Limit	Less than 4g

3.2. Others

Operating temperature	-20°C－65°C

Humidity	5%To 95% Non-condensing
Dimension	88mm×46mm×18mm
Voltage	12-24V
Average Current When stand-by	<84mA
LED	Green/ Blue/ Red LED showing GPS、GSM and power status
Out set SOS Key	One SOS emergency key: for urgent call

3.3. LED State Description

Blue LED--- indicate the GSM signal state

State	Means
constant Lighting	no SIM card or not GSM net
flashlight once interval 8s	GSM receiver work well and standby
flash quickly	voice calls or in GSM connection

Red LED---indicate charge sate

State	Means
constant Lighting	charging
No light	charging was completed

Green LED--- indicate the GPS signal state

State	Means
No Lighting	Working, but no location
Flashing	Working and has located

4. Products Appendix

1）TLT-2H GPS/GSM Vehicle Tracker

2）Power cable

3）Battery

4) User Manual(CD ROM)

5） SOS Button

5. Install SIM Card

1 Select SIM card

2.You can use GSM card from Local Mobile.

3. Make sure enough money in the SIM card, and support SMS/GPRS function.

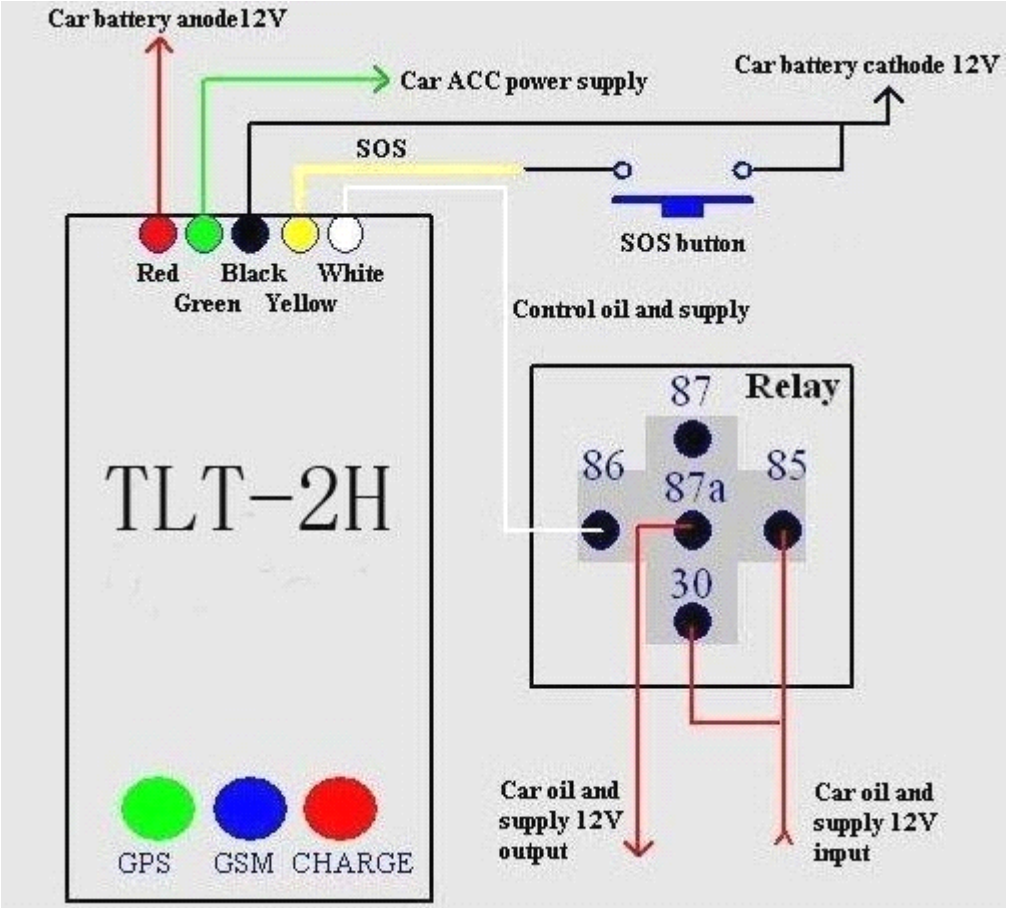
4. Draw out the rear cover, there is a slot for SIM card. Then push the card into the slot until it fully inlays, and ensure that it locks well.

6. Installation Diagrame

The external 5 wires of TLT-2H GPS/GSM tracker are as follows. Red for the 12V car power wire, connect to the car battery anode; Black for the earth GND, connect to the car battery cathode; Yellow for the SOS for help Control wire, connect external SOS switch button to car battery cathode; Green wire connect ACC car power supply, that is, with the car CD, radio, and other automotive electrical appliances in parallel. When the vehicle key puts in the ACC gear, the green line will examine the 12v voltage, the terminal will open the charge function automatically. White for cut-off oil and power control wire, connect to the relay coil 86, i.e. one end. Relay 85, i.e. anther end connects to oil and power supply 12V. 30, 87a are normal closed-end, series in the oil and power supply circuit. Please note that if the installation of lead wire is right, if errors installation led to the equipment damage, At Own Risk, the company is not responsible for it.

7. Application

After you see the brief introduction of this unit, now please see the detail operation of this unit:



First Step, be the host of the unit, only the pre-saved number can receive the alarm message from the unit.but any number can send command to the unit to change the configuration of teh unit. Command as follows:

1. Change the telephone number in advance instructions

Format: *new numbers with 4-20 figures * user password (4 figures) *location number (1-3) **

eg: *13900000000*0000*1**

Explanation: You can store 3 telephone numbers at most in advance。When TLT-2H tracker receives the instruction and confirms the user password correctly, substitutes the new number for the existing number. After success, it will send the confirmation messages (SET USER NUMBER (1-3) OK) to the sender.

The Work Mode of TLT-2H

TLT-2H have two work mode---SMS and GPRS Mode. If the users only need track the car by mobile phone, and check the position (latitude and longtitude) in Google Map, or control the oil and power by mobile phone, SMS Mode is enough. If the users want to track the car by real-time and also want to check the History Record, the users can choose GPRS Mode.

SMS Work Mode:

Format：700+ user password (4 figures)

eg: 7000000

Explanation：When TLT-2H tracker receives the SMS and confirms the user password correctly, it switches to the SMS application mode. After the success, it will send the confirmation messages (SET MODE OK, CURRENT MODE: SMS P2P) to the sender.

GPRS Work Mode:

Format：710+ user password (4 figures)

eg：7100000

Explanation: When TLT-2H tracker receives the SMS and confirms the user password correctly, it switches to the GPRS application mode. After the success, it will send the confirmation messages (SET MODE OK，CURRENT MODE：GPRS) to the sender.

Generally Application of SMS Mode

1. 1 **Single localization request instruction**

Format: 666+ user password (4 figures)

eg: 6660000

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, reads the GPS information. No matter whether effective, the information with the replying base station which is the set of the original software will be sent to the sender.

Data format:

Lat: Latitude Direction (+/-) Latitude Value (Accuracy for 5 after the decimal point)

Long: Longitude Direction (+/-) Longitude Value (Accuracy for 5 after the decimal point)

Speed: Speed KM/H (Accuracy for 2 after the decimal point)

Direction: Direction (Accuracy for 2 after the decimal point)

Date: Date YYYY-MM-DD

Time: Time HH：MM：SS (GMT)

BS: Base Station information

Fix: Location state (A/V)

ID: IMEI

STATE: Message state

Effective data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

ID: 353686009002030

STATE: SMS

Invalid data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: V

ID: 353686009002030

STATE: SMS

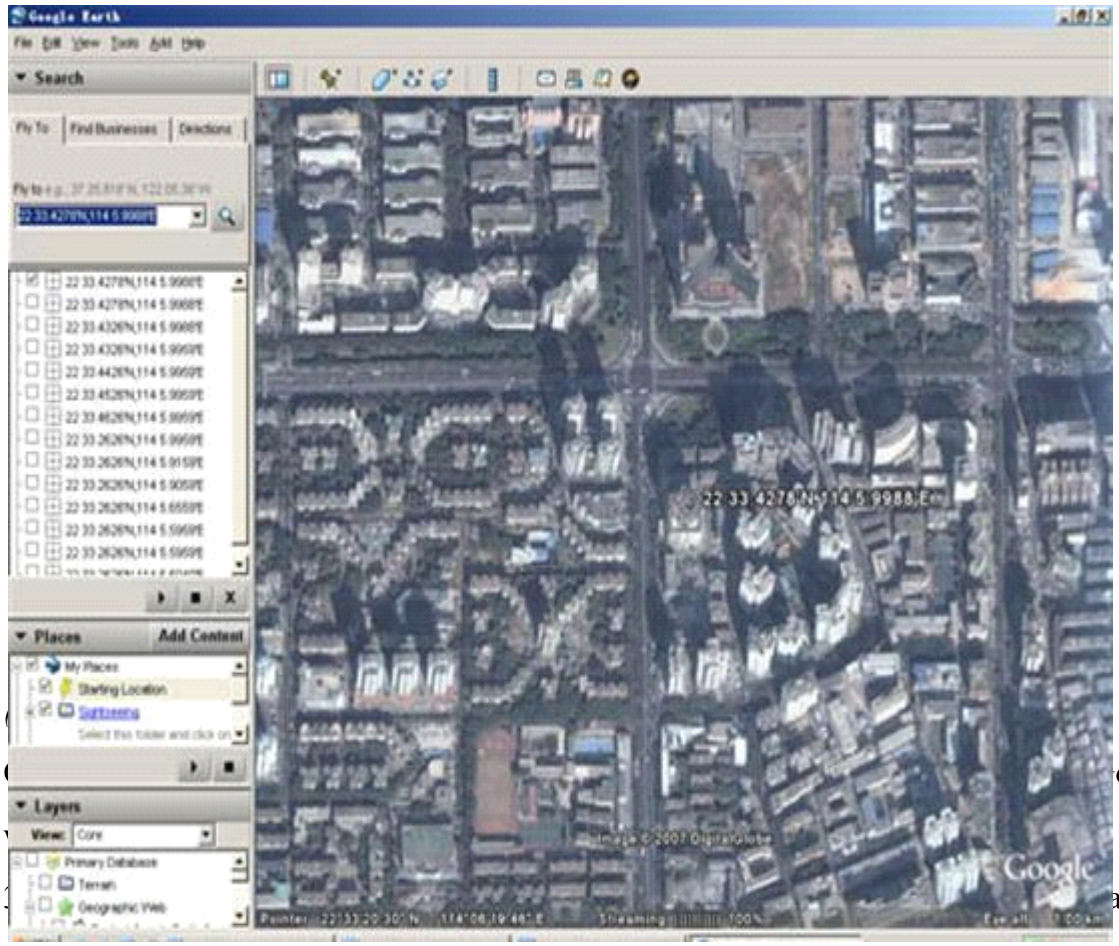
Note: If in the cold start and GPS no position, it will return to the void of information:

eg: GPS UNAVAILABE,PLEASE TRY AGAIN LATER

Display the location on map

1) Download Google earth software from http://earth.google.com

2) Start the Google earth software. (For more information about Google earth software, please refer tohttp://earth.google.com)



oogle map

and code to the GPS tracker TLT-2H . Input the latitude and longitude that you receive from SMS and click on search button, the Google earth will display the location map for you.

eg： You receive the information from the tracker. As follows:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

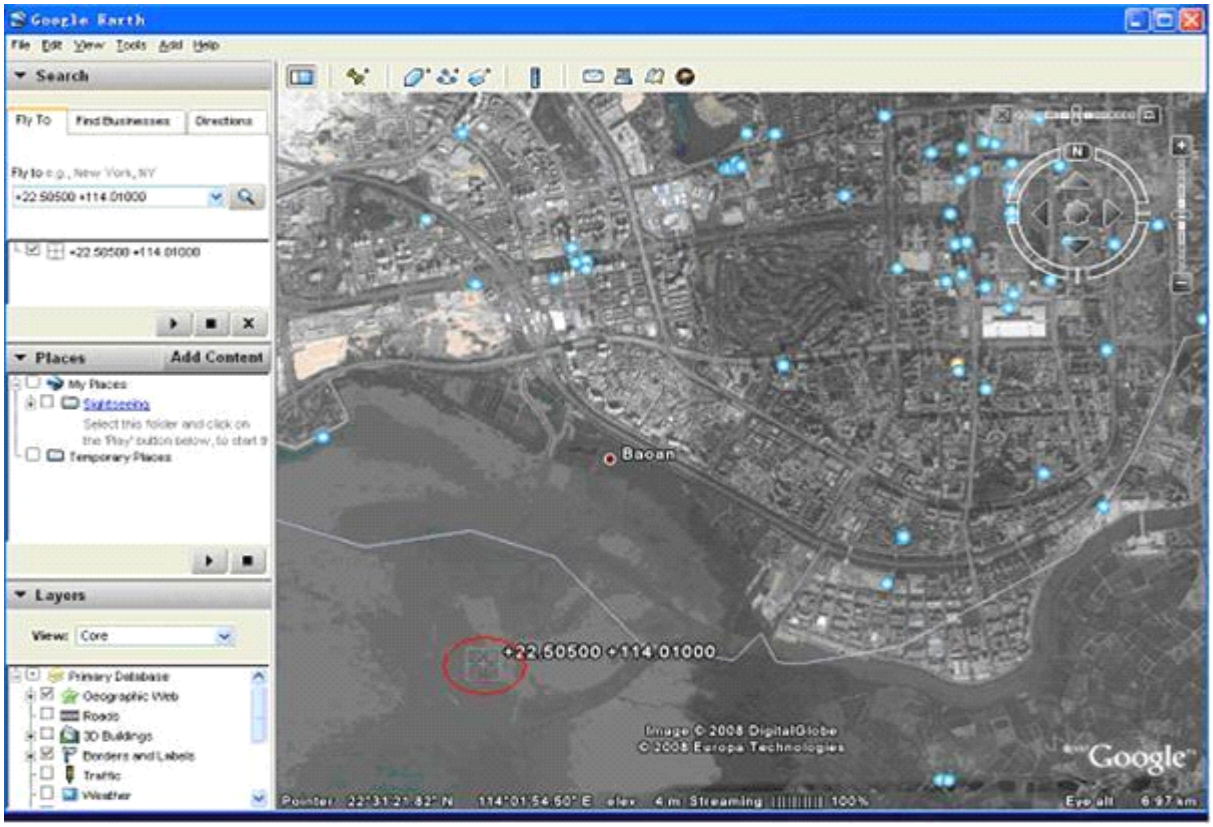
ID: 353686009002030

STATE: SMS

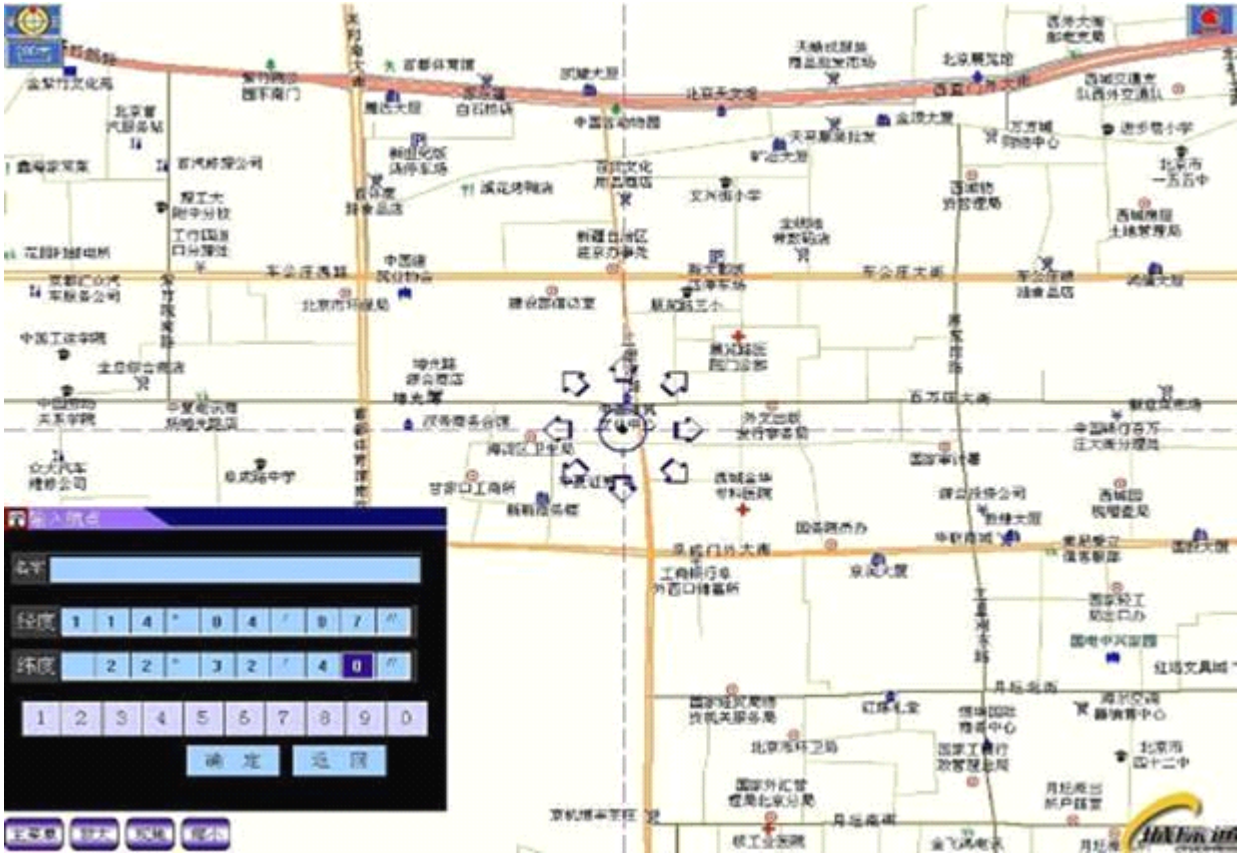
Search the position on the Google map, in relevant position input：

+22.50500 +114.01000

Obtain the following picture:



Or you can use local map software on PDA or car navigation device, input the position date. (*Note:* pay attention to change the position date format)



2. **Cut-off electricity and oil function**

1. Open the cut-off electricity and oil function

a. Command format: 900 + user password

b. Confirm command format: 901 + user password

c, Directly Command : 940+ user Password

Note : 940=900+910 , the unit will implement this command at once after receive this command.

Description: Due to the command with a certain degree of risk, so needs to do a more confirmation operation. When the user need to cut-off electricity and oil, using a mobile phone to send format a command, the device will return to: "Confirm Power OFF?" after it receives the order and confirm the user password correct. If it receives the user sending format b command in ten minutes and confirms password correct, white wire will output low level in order to control the outside relay to cut off oil and electricity. After completion, send confirmation message "POWER OFF OK" to the user.

2. Cut-off electricity and oil function to recovery command

a. Recovery command: 902 + user password

b. Confirm the recovery command: 903 + user password

Description: When the device receives the cut-off electricity and oil function to recovery command by the preset user numbers and confirms the password correct, will send the confirm information "Confirm Power ON?" to the sender, and then prepares to receive the confirm command. If within 10 minutes the device receives the users confirm command, white wire will output high level in order to control the outside relay to recovery oil and electricity. After completion, send confirmation message "POWER ON OK" to the user.

c, Recovery Command instant

941+user Password

Note : 941=902+903 the unit will implement this command at once after receive this command.

Attention: this function is certain risk, it's will happen traffic in the freeway if you send this command, so please consider again and again.

The Advanced Application and Configuration of SMS Mode

1. Set up the user password instruction

Format: 777+new password (4 figures) +old password (4 figures)

eg: 77712340000

Explanation: When TLT-2H tracker receives the SMS and confirm the user password correctly; changes the new user password to the old password. After set successfully, it will send the confirmation messages (SET USER PASSWORD OK) to the sender.

2. GPS state setting instruction

GPS will enable on the on / off / adaptive three work states by send text messages command. GPS state is open after factory settings or reset.

1, open the GPS instruction

instruction format: 222 + user password 4

For example: 2,220,000

Description: When the TLT-2H receiving the order, confirm the user password is correct, open the GPS power, after the success of the sender to send the confirmation to the "GPS ON OK . "

2, close the GPS commands

command format: 333 + user password 4

For example: 3,330,000

Description: When the TLT-2H receiving the order, confirm the user password is correct, close the GPS, after the success of the sender to send the confirmation to the "GPS OFF OK" .

3, adaptive GPS instructions (power function)

commands: 100 + user password

for example: 1000000

Description: When the TLT-2H receiving the order, confirm the user password is correct, close the GPS to the sender immediately send a confirmation SMS: VIBRATION SENSOR ON OK. Products built-in vibration sensor, once the monitoring of movement and change to the tracking devices to immediately open the GPS, 5 minutes if there is no monitoring of changes to the tracking devices will automatically turn off sports GPS. Note: If the long flat roads or the highway, GPS may be long dormant, but will not be awakened. If at this time to real-time location tracking, the user can send 222 + user password to re-open the GPS.

4, GPS special power-saving mode

1) Special power parameters

Instruction format: 199 + user password + Xxx + Lyy + Hzz

example: 1990000S030L01H03

Description: S030 that off GPS 30 minutes, and can be set (1 255). Open the GPS that the first phase of L01 is 1 minute, can be set (1 ~ 98), the first stage if the second stage is not positioned directly off GPS; if not positioning the first stage, the second phase, H03 GPS represents the total time for the opening, that the second phase of 2 minutes (ie Hzz-Lyy), you can set (3 ~ 99). When S is set to 0, then exit the power saving mode automatically switches to the GPS normally open mode, that is, 188 command will not work. When the module receives the instruction to confirm the user password is correct, according to the user to set parameters to configure the S / L / H items, after the success to send the confirmation message: GPS AUTO MODE: (yy-zz) / xxx Minutes.

Note: (1) Set S / L / H and other parameters, if the high is 0, then we must make zero. For example: To turn off gps30 minutes will set the S030, but not set to S30.

(2) Hzz opened GPS to set the total time, not less than Lyy.

(3) 199 instruction set of the parameters are not lost restart, the reset will not change until reset.

(4) Only in exceptional power-saving mode, the device can be set in accordance with the parameters of the timer switch 199, GPS, other modes will not.

2) Special power saving mode is on

Instruction format:188 + user password

for example: 1880000

Description: 199 instruction set when the device is successful, send 188 commands to take effect. When you receive the confirmation code 188 instructions correctly, to switch to GPS mode power saving mode, the sender replies to the confirmation message: GPS AUTO MODE ON OK. After entering power-saving mode, the device 199 in accordance with the parameters set by instruction time switch GPS, in order to achieve power saving purposes. Such as setting 1990000S030L01H03, sending 188 to enter this mode, the device according to the 199 instruction set, turn off the GPS 30 (S030) minutes, and then open the 1 minute (L01), if the GPS in the open for 1 minute (L01) localization, directly off GPS 30 min (S030). If a minute (L01) did not locate, will continue to open the GPS 2 min (H03-L01). 2 minutes regardless of whether the GPS positioning, all will be closed again for 30 minutes, again and again.

Note: (1) switch to power saving mode GPS work, you must first set the command parameters 199. (2) Open the power-saving mode, off the stage in the GPS, GPRS sampling time and historical data are uploaded will stop; in GPS positioning if the open stage, GPRS uploaded regularly and historical data sampling will be back to normal.

(3) Open the power-saving mode, the GPS off stage, whether text mode or GPRS mode, the location information if the request operations, such as 666, # 806, phone positioning, SOS, 4XX, then the GPS would be immediately Open, read the latest GPS data until the arrival of the next power cycle, and then turn off GPS.

(4) If you need real-time tracking, please use the GPS normally open mode.

3. Instructions to send location information periodically

Instruction Format: 4 xx + user password 4

For example: 4,010,000

Description: One is a 0-9 × that figure, when XX is less than 60, its unit is minutes, when XX is greater than 60, the value of XX minus 60, the unit is the hour, that is 61 to 1 hour, 62 for 2 hours, and so on. When TLT-2H receiving the order, confirm the user password is correct, TLT-2H set the current time as the initial time of time, XX for the interval to confirm the sender's mobile phone to

send text messages "TIMER START, REPEAT INTERVAL: <X> MINUTES ". Then start basic value of the initial time of time, when the arrival interval × × time to send the previous" one-time positioning request "return message format location information, which information items automatically update the state STATE: TIMER. When XX is 00, the cancellation of regular orders to send position information to the sender's mobile phone to send confirmation message "TIMER STOP". Note: The current version of the maximum time interval can not exceed 2 hours, For a longer time, please let me company dedicated to You customize.

4. Calling switch instruction

Calling off instruction format: 150 + user password

for example: 1500000 calling open instruction format: 151 + user password for example: 1,510,000

Description: When calling off TLT-2H received instructions to confirm the user password is correct, close the calling function (including the SOS distress, power failure alarm calling, fence alarm calling, speed alarm, etc), after the success of the sender to send the confirmation to the "SET VOICE CALL: OFF". When TLT-2H receive the caller to open command, confirm the user password is correct, open the calling features (including the SOS distress, power failure alarm calling, fence alarm calling, speed alarm, etc), after successfully sending a confirmation to sender "SET VOICE CALL: ON".

5. Phone positioning function

Description: When stored in one of the three phone numbers of calls come in, and hang up after ringing sound 2-5, then sent to the phone number as a single positioning of the location information, the information in the status prompt for the STATE: CALL. Non-stored phone numbers hang up incoming calls directly without any treatment.

6. Active help feature

Description: When the long press SOS button more than 3 seconds, and immediately the three phone numbers to send stored as previously, "Positioning single request" message format returned location information, the information in the state prompted the STATE: SOS. Also call a telephone number stored in the first. If unsuccessful (shutdown or not connected), then in turn call the second, third. Note: If the calling state is off, it will not make calls, send text messages to pre-existing users only.

7. Power failure alarm

Turn power off alarm command: 011 + user password

for example: 0110000

turn off power alarm command: 010 + user password

for example: 0,100,000

Description: When TLT-2H receive power from the stored number of open alarm instruction: 011 + user password After the success of the sender set to send a confirmation SMS: DEFENCE ON, 10 seconds into the deployed state. Once external power has been illegally cut, TLT-2H are immediately sent to the three numbers such as 3.1.5 stored location information, the information in the status prompt for the STATE: DEF. Also call a telephone number stored in the first. If unsuccessful (shutdown or not connected), then in turn call the second, third. When TLT-2H received telephone number stored commands the closure of power alarm: 010 + user's password, set up after the success of confirmation to the sender to send a short message: DEFENCE OFF, power off alarm removed, TLT-2H no longer monitor the external power supply incidents of illegal cut. Note: 1. Factory set or reset operation after the power failure alarm is turned off. The state machine switches from the impact of the changes until you receive further instructions or reset operation. 2. If the calling state is off, it will not make calls, send text messages to pre-existing users only.

8. **Electronic fence function**

Explanation: One of 3 telephone numbers stored in advance calls in, and hangs up after ringing 2-5 times, then the TLT-2H will send the location information to this number such as 4.1.6 to this number, the information state item automatically updates STATE: CALL. But other incoming numbers will automatically hang up.

Electronic fence takes the set coordinates as the center, the set radius parameters to determine the scope of the fence. When open this feature, once the TLT-2H beyond the scope of the set fence, it will send location information as to 4.1.6 to the 3 preset numbers. The information state item automatically updates STATE: OS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

When the TLT-2H re-enters the fenced area, it will immediately send location information format 4.1.6 to the three preset numbers. The information state item prompts STATE: RS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

1) Set the scope of the fence

According to the input formats different of coordinates, user can choose the format as follows

instructions to operate.

Format1：003+ user password E/Wdddmm.mmmmN/Sdd.mmmmRzzz.z

eg: 003xxxxE11406.0024N2233.4230R1

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Edddmm.mmmm is longitude information with units of degrees and minutes, and the ddd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Ndd.mmmm is latitude information with units of degrees and minutes and the dd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages “SET GEO-FENCE OK” to the sender.

Format2：004+ user password E/Wddd.ddddd N/Sdd.ddddd Rzzz.z

eg：0040000E114.10004N22.55705R999.9

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Eddd.ddddd is longitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Ndd.ddddd is latitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages “SET GEO-FENCE OK” to the sender.

Note: 1. Radius of the fence can not exceed the definition of its domain; the value of the decimal part for zero must input zero fill. For example: R=1, it is important to enter into 1.0.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the present number.

3. Degree and minute is divided into sexagesimal system converter, that is, 1d = 60m

Format 3 : 005+User Password Rzzz.z

eg: 0050000R0.1

Note : When this unit receive this command and confirm the password is right. And read the Update gps data whether is available. If ok, take the lat/log to the coordination, and the R for The Radius, and also pen the Geofence at the same time. If the configuration is ok. The unit Will send "set geo fence ok " to the sender. If the update GPS Data void, the unit will give up and then red the next one, if the unit can't receive the data above 50sec, the unit will send A message to the sender which is "ERROR GPS DATA, TRY AGAIN LATER"GPS restore the original settings after the state (on / off / adaptive).

1.1>. Open the electronic fence: 211 + user password

when the TLT-2H received confirmation of the order after the user password open the e-fence to the right side to return the confirmation messages sent: GEO-FENCE ON.

1.2> turn off the electronic fence: 210 + user password

when the TLT-2H received confirmation of the order the correct user password and close the electronic fence to return to the sender is recognized short message: GEO-FENCE OFF.

Note: 1, the fence can not exceed the radius of the domain, the fractional part of the right of zero must enter zeros. For example: R = 1, must be entered as 1.0.

2, if the calling state is off, it will not make calls, only send messages to the user.

3, the degree and is divided into 60 hex conversion, that 1d = 60m.

2> set the rectangular range of the electronic fence Format: 006 + user password + GX, IO / I / O, E / W longitude limit + N / S latitude limit, E / W longitude limit + N / S latitude limit

for example: 0060000G1 , IO, E114.10004N22.55705, E115.10006N23.55706

Description: GX, said the electronic fence X, X range【1,16】. IO fencing in and out of all alarms; I selected as a finalist alarm; O as a fence alarm. Latitude and longitude values in degrees, decimal point to be retained after five, followed by zero can not be omitted. IO: fences are out of the alarm; I: Finalist bar alarm; O: a fence alarm;

When the device receives the instruction to confirm the user password correctly, the sender returns confirmation messages: SET SQUARE GEO-FENCE GX (IO / I / O) OK.

Note: (1) is set up, automatically open the fence, then the default fence type I0: out of the fence are the police.

(2) If the calling state is off, it will not make calls, SMS mode, only send messages to the user.

(3) The setting of this directive, and the switch from power-down effect of changes until you receive further instructions or reset operation.

(3) (4) After reset, the value of latitude and longitude marked with 0. Fence is turned off.

2.1> Open rectangular electronic fence

Open all rectangular electronic fence instruction format: 311 + user password

for example: 3110000

Open a single rectangular electronic fence instruction format: 311 + user password + GX

for example：3110000G5

Description: This command is used to open all the electronic fence and open a single rectangular rectangular electronic fence, GX means that an electronic fence X, X range【1,16】. When the device receives the instruction correctly recognized the user password to open the electronic fence sender rectangular return confirmation messages: Open all rectangular electronic fence resume SET ALL SQUARE GEO FENCE: ON; open a single rectangular electronic fence to SET SQUARE GEO FENCE GX: ON.

2.2> closed rectangular electronic fence

Turn off all electronic fence rectangular Format: 310 + user password

for example：3100000

Electronic fence off a single rectangular Format: 310 + user password + GX

for example：3100000G5

Description: This command is used to open all the electronic fence and open a single rectangular rectangular electronic fence, GX means that an electronic fence X, X range【1,16】. When the device receives the instruction correctly recognized the user password to open the electronic fence sender rectangular return confirmation messages: Open all rectangular electronic fence resume SET ALL SQUARE GEO FENCE: OFF; open a single rectangular electronic fence is SET SQUARE GEO FENCE GX: OFF.

Note: If you set multiple alarms occurred while rectangular enclosure, the priority call G1 fence, fence G2, G3, G4 ... ... only to send the relevant location information, not make the call. Factory configuration and reset, the default state for the RS.

Note: Three ways to set the electronic fence Choose one, when the product is received by the electronic fence electronic fencing instruction set feature automatically. When turned off the electronic fence is open again after the previous settings remain valid.

9. Open the e-fence: 211 + user password

When TLT-2H receiving the order to confirm the user password is correct to open the electronic fence to return to the sender to confirm the short message: GEO-FENCE ON.

10. **Close E-fence: 210 + user password**

When TLT-2H receiving the order to confirm the user password is correct closed electronic fence to return to the sender to confirm the short message: GEO-FENCE OFF.

Note1: 1, fences can not exceed the radius of its domain, the fractional part of the right to a value of zero must enter zeros. For example: R = 1, must be entered as 1.0.

2, if the calling state is off, it will not make calls, send text messages to pre-existing users only.

3 degrees and is divided into 60 binary conversion, that 1d = 60m.

Note2: Three ways to set the electronic fence Choose one, when the product after receipt of the electronic fence electronic fencing instruction set feature automatically opens. When turned off the electronic fence is open again after the previous set are still valid.

11. **Speed alarm**

Instruction Format: # 122 # user password # X # #

example: # # 250 # 122 # 0000 #

Note: X is the speed reference value, the data type integer, unit km / h (KM / H), the domain of 【0,999 】. When TLT-2H receiving the order to confirm the user password is correct, it will set the speed reference value X, X = 0 时, close the speed alarm function, X! = 0 speed alarm function is turned on, after the success of the first stored to the user send confirmation message "SET RATE LIMIT: X. When the speed alarm function is turned on, TLT-2H began to read the speed of GPS data and comparison with X real-time. If the GPS speed is greater than in X, the instructions at this time speeding, TLT-2H immediately sent to the No. 3 time in front of pre-existing "one-time positioning request" message format returned location information, the information in the status prompt for the STATE: OVER SPEED. speeding alarm if it detects the speed of GPS in less than X,

it indicates the speed at this time to return to a safe speed driving, TLT-2H immediately sent to the No. 3 time in front of pre-existing "one-time positioning request" message format returned location information, the information in the state prompted the STATE: SAFE SPEED.

12. Historical data uploading

In SMS mode, need to use this feature on the switch to GPRS mode on IP, APN settings, etc., specific instructions and upload the data format, see 3.2 based applications based on GPRS operation.

1, historical data records set

command format: # 807 # user password # X # #

example: # 807 # 0000 # 30 # #

Note: X is a historical record of the sampling frequency, an integer, the domain of 【0,999】unit is seconds. When TLT-2H receiving the order to confirm the user password is correct, set the historical record of the sampling frequency is X. If X = 0, then close the historical data records, if X! = 0, then the start time interval to X seconds for the GPS data received and stored, after a successful return to the sender to confirm the information "SET SAMPLING OK".

Note: 1, record the size of each data about 100B (BYTE).

2, historical data records for storage space allocated to 864KB (BYTE), data storage stack covered with an updated approach. Suppose X = 30, you can record about 3 days of data, if X = 300, you can record approximately 30 days of data. When the data is full 864KB, the new data received to cover the first recorded data automatically.

3, if the power-saving feature is turned on and the TLT-2H long at rest, then history will automatically shut down until the TLT-2H wake up and opened the GPS.

2 set of historical data upload instructions

A, From 24-hour history:

Instruction Format: # 808 # user password # 24 # #

example: # 808 # 0000 # 24 # #

Note: When TLT-2H receiving the order confirmation user password is correct, return to sender confirmation message: "START UPLOAD 24H HISTORY RECORD". Sent to the server while starting the last 24 hours recorded historical data, format and GPRS mode "immediately upload the current location of command" of the location information as shown, information in the state prompted the STORAGE.

B, to read all data records:

Instruction Format: # 808 # 0000 # #

Description: When TLT-2H receiving the order to confirm the user password is correct, return to sender confirmation message: "START UPLOAD ALL HISTORY RECORD". Also sent to the server storage area began to record all historical data, format and GPRS mode "immediately upload instructions current location," location information shown. Information in the state prompted the STORAGE.

13. Low voltage warning

When the TLT-2H ’s working voltage lower than the set, to read the GPS information, whether or not effective, immediately send the format as 4.1.6 location information to the three stored numbers, the information state item automatically updates STATE: LP. Send a total of three times,

each time one minute interval.

14. ACC detect charge function

1) For Charge

Description: TLT-2H check the state of ACC of the power through the ACC Cable,so the ACC ON when the car is moving, and the power of the car will recharge to the unit. and the ACC Off when the car is parking, and the power of the car will not recharge to the unit.

2) The On/Off Command for ACC State

Open Command of ACC State : 091+ Password
Eg :0910000
Close Command of ACC State : 090+ Password
Eg:0900000
Note: when TLT-2H receive the 091 command, and confirm the password is correct.TLT-2H will send a message to the sender what the content is "ACC STATE PROMPT:ON". when ACC is ON/OFF，the TLT-2H will send the current position to the pre-saved numbers whether the GPS Data is avaible or valid, and the state will display “AUTO START/AUTO STOP”be the ACC State.

when TLT-2H receive the 090 command, and confirm the password is correct.TLT-2H will send a message to the sender what the content is "ACC STATE PROMPT:OFF". when ACC is ON/OFF，the TLT-2H will not send any message whatever the unit is GPRS Or SMS Mode .

Attention : the default is ON, and once the configuration is ok whatever the unit is ON/OFF, the unit will not change until receve the next command or reset command

15. ACC Checking and Alarm for Moving

Alarm Command for Moving :008+Password+Rzzz.z

Close Alarm Command for Moving : 009+Password

Note: when TLT-2H receive 008 command, and confirm the password is correct,put Rzzz.z for the radius of area. the zone of zzz.z is 【0.1～999.9】, the unit is KM. after configuration is ok, TLT-2H will send "SET MOVE RADIUS OK"to the sender.

After configuration of the alarm for moving is complete, if TLT-2H checking the ACC State is changed which from ACC ON to ACC OFF, after three minutes, the TLT-2H will take the current position for the coordiration point, the unit will open the defence(use the zzz.z) whether the GPS Data is Available or Valid .

when the ACC is OFF, if TLT-2H checking the car over the defence,in the SMS Mode, the TLT-2H will send a message to the pre-saved numbers what the state is "STATE:ACC OS" (the unit will send the current position to the server,the state is "ACC OS",and call the pre-saved numers,

the 150/151 comamnd will affect the unit that whether call the pre-saved numbers. if you reset the unit, the unit will only send message and don't call numbers) ,once the car coming the defence, the unit will send current position information to the server or send message and call the pre-saved numbers, and the state is "ACC RS"

Once TLT-2H checking the ACC state is close(from Open to Close), the Alarm for Moving will close automatically, when the ACC state is open(from Close to open), the Alarm for Moving will open automatically

When TLT-2H receive 009 Command and confirm the password is correct, the Alarm for Moving is closed automatically whatever ACC State is open or close unless send 008 command again. after you set 009 command, the utni will send "MOVE DEFENGCE:OFF" to the sender.

Attention : the Alarm for Moving of default is open, and the area is 500M

16. Updata on the Air

1). Formate : !-Password

Eg: !-0000

Note: when TLT-2H receive this command and confirm the password is correct, the unit will restart and enter FTP Server to download procedure automatically.after succesful, the unit will restart again, and it's ok.

2) Formate : !-Password,FTP Address, User Name, Password

Eg: !-0000, igarin.gicp.net,auto,123

Note: when TLT-2H receive this command and confirm the password is correct, the unit will restart and enter FTP Server to download procedure automatically.after succesful, the unit will restart again, and it's ok.

Attention : the area of FTP Address is 【5，35】, and also can use domain, and made is for characters,numbers,. _（_）（-）. the user name is for FTP, the area is 【3，20】, the password is FTP'S password, the area is 【3，20】.

17, change the time zone settings instructions

Command format: 896 + user password 4 + D + NN

Example: 8960000E08

Description: One user password for the four, D values of E, W, that the time zone

thing, NN is a two-digit (1-12), that when code. When the product after receipt of order, confirm the user password is correct, after the success of products set to sender send a confirmation SMS TIME ZONE SET OK, CURRENT: DN, such as: TIME ZONE SET OK, CURRENT: E8. Such as setting 8960000E08, set the time and after the success of all relevant data to the GPS receiver on the basis of time plus 8, set 896000W07, set the time and after the success of all relevant data to the GPS receiver based on the reduction of time 7. Default output Greenwich time, if you set the parameters of NN for the 00 cases, product recovery output GMT

18, Location to return a single address instruction in Chinese

Instruction format 1:667 + user password

for example: 6670000

instruction format 2:667 + user password + MAP

example: 6670000MAP

instruction format 3:667 + user password + MAP, WWW, HHH, ZZ

example: 6670000MAP, 640,480,15

Description: When the device receives the instruction 1, and confirm the correct user password immediately after reading the GPS information, recognition information is valid, send the address information to send the number of Chinese.

Such as: King East Road, Shenzhen, Guangdong Poly Garden East Gate south 339 degrees east within a distance of 31 meters. Send commands 2, will return a URL, open the URL you can see the current location and a current position of the shots, screenshots default size is 240 * 320.

Such as:http://www.gps069.com/cngps/mapaddr.asp?lng=114.09998&lat=22.55709&z=15&w=240&h=320

If you think the default screenshot is too small, you can send commands 3, you can customize the size and scale the screenshot, WWW is the width of the image, HHH for the picture height, ZZ for the zoom level. (Note: WWW, HHH's value is less than 1000. ZZ between the values proposed in the 1-20, adjust the ZZ can adjust the zoom level shots).

Such as:

http://www.gps069.com/cngps/mapaddr.asp?lng=114.09998&lat=22.55709&z=15&w=640&h=480

19, a single screenshot of Google Maps Location Links Return Directive

Instruction format 1: 668 + user password

for example: 6680000

instruction format 2: 668 + user password, WWW, HHH, ZZ

example: 6680000,999,999,15

Description: When the device receives the instruction 1, verify that the correct user password immediately after the read GPS information, recognition information is valid, send the current location of the Google Maps screenshot of the website, the screenshots default resolution of 240 * 320. If you think that image is too small, you can send commands 2, custom picture size, in which the representative picture of the width of the WWW, HHH on behalf of picture height, ZZ for the zoom level, you can set the size to comply with the resolution of your phone. (Note: WWW, HHH these two values can not be greater than 1000, ZZ between the values proposed 1-20) when the device receives the command, make sure the correct user password immediately after reading the GPS information, recognition information valid, send the current location of the Google Maps screenshot of the website, you set the capture resolution of the resolution. Screenshots URL example:

http://maps.google.com/maps/api/staticmap?center=22.557118,114.100010&zoom=15&size=240x320&markers=22.557118,114.100010&sensor=true

20, a single positioning command to return links to Google Maps

Command format: 669 + user password for example: 6,690,000 Description: When device receiving the order, confirm the user password is correct, immediately read GPS information, recognition information is valid, send the current location on Google Maps link to the number, then the user through your PDA or smart phone access, view in Google Maps here.

Website Example:

http://maps.google.com/maps?f=q&hl=en&q=22.554765,114.104716&ie=UTF8&z=16&iwloc=addr&om=1

Note: The above three commands, if sent in the past, not on the server connection or other reasons not connected, the reply:

1) If the connection is not on the server, the reply: SEVER BUSY, PLEASE TRY AGAIN LATER.

2) If there is no GPS location, then the reply: GPS UNAVAILABE, PLEASE TRY AGAIN LATER

3) for domestic policy reasons, in the country to use Google Maps will lead to deviation from the actual address.

GPRS Work Mode

The way of change mode please check the instruction. In GPRS Mode, can save three numbers(1.2.3) and a password (4 digits) , a group TCPIP IP and Port, a GPRS Service Password, a APN Number. The configuration command is not effect whether the unit is open or close until the unit receive the new command.

1. Three steps to send the GPS Position of unit to Platform

1 .Set up the access point name of GPRS

1 Format1：#803#user password#APN##

eg：#803#0000#CMNET##

Format2：#803#user password#APN#APN user name#APN password ##

Explanation1: Different GSM / GPRS service associations provide different APN, please according to local service providers to provide the APN to choose format 1 or 2 to use set.

Explanation2: When TLT-2H tracker receives the instruction and confirms the user password correctly, updates the access point name to the new access point name. After the success, it will send the confirmation messages to the sender. If sent the format 1, the content is “SET GPRS APN OK”; if it is format 2, the content is “SET GPRS ACCOUNT OK”.

Note: APN is CMNET after factory set or reset. APN is characters composed of 3 to 35 letters, numbers, dots (.) underscore (_) and connectors (-). APN user name and user password are respectively characters composed of from 3 to 20 the numbers and letters.

2. Set up the TCP/IP server and IP’s address and port number

Format：#804#user password#fixed IP address # port ##

eg：#804#0000#222.125.12.32#80##

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, updates the IP address and port number preserved in the module， After the success, it will send the confirmation messages to the sender. The content is “SET SERVER IP AND PORT OK”

3. **Upload Data Settings Automatically**

There are two mode about Upload Data Automatically. One is "Car Moving Tracking Mode". Another is "Car Stop Tracking Mode". Both of this two mode is change automatically due to the ACC State . The ACC is open and it's "Car Moving Tracking Mode". The ACC is close and it's "Car Stop Tracking Mode" . The two mode is different according the configuration GPS interval time and upload number of data, so can display the detail Real-Time Trail when the state is "Car Moving Tracking Mode" and upload the data sparseness when the state is "Car Stop Tracking Mode" so can save the SIM Card Fee and also can keep the tracing effect. When the Upload Data Setting is change, the unit will send the data from the memory automatically, and then follow the mode.

3.1 Car Moving Tracking Mode

Format：#805#user password# sampling interval T # the number of upload data each time N ##

eg：#805#0000#10#1##

Explanation: The time T unit of the sampling is second, 10 seconds at least， 59999 seconds at most； The number of upload data each time is N, at least is 1, at most is 50.

When TLT-2H receive the command, and confirm the password is correct, then TLT-2H will send a feedback message to the sender what is SET GPS SAMPLING TIME AND QUANTITY OK . also will implement this command, then the unit will get the GPRMC data and save in the memory. and send the GPRMC Data to the server.if the data can't send it to the server by other excuse like GSM Signal or Bad Internet, the data will save it automatically, and when the internet is ok, the unit will send the data again,and the state is AUTO. when users set the numberof data is 0, the unti will close this function,and the unit will send message to the sender what is "GPRS TIMER STOP"

3. 2. **Car Stop Tracking Mode**

Format : #809#user password#X#Y

Explanation: The time X unit of the sampling is second, 10 seconds at least， 59999 seconds at most； The number of upload data each time is Y, at least is 1, at most is 50. Sampling interval T and the number of upload data each time N product should meet greater-than-equal 60, that is T*N≥60.

When TLT-2H receive the command, and confirm the password is correct, then TLT-2H will send a feedback message to the sender what is "GPRS REPORT SAMPLING 2 OK ″ . also will implement this command, then the unit will get the GPRMC data and save in the memory. and send the GPRMC Data to the server.if the data can't send it to the server by other excuse like GSM Signal or Bad Internet, the data will save it automatically, and when the internet is ok, the unit will send

the data again,and the state is AUTOLOW. when users set the numberof data is 0, the unti will close this function,and the unit will send message to the sender what is "GPRS SAMPLING 2 STOP"

Attention :

1. this function is not effect by open or close the unit until the unit receive the new command .
2. The bland area only can save 300PCS Data, the new data will recovery the old data if above 300PCS Data.
3. Upload the data is limited by Move Sensor, if the Move Sensor is open, and the unit will stop send data in this state, please see the detail specification of Move Sensor.

After you complete the three steps, then you can track your car in the platform.

Note: To ensure the product can normally respond to SMS commands, set the sampling interval of time greater than or equal to upload 20 seconds.

Note: 1, time to upload the switch setting is not affected until you receive further instructions or reset changes to the relevant operation.

2, the blind reported immediately back up to 300 data, more than 300, the new data will overwrite the first backup data.

3. Replacement data, if a number of stored data will be uploaded by one per 50, not 50, the number of how many upload until the replacement of complete data, the data began to upload now.

The Advanced Application and Configuration of GPRS Mode

1**. Change the telephone number in advance instructions**

Format: *new numbers with 4-20 figures * user password (4 figures) *location number (1-3) **

eg: *13900000000*0000*1**

Explanation: You can store 3 telephone numbers at most in advance。When TLT-2H tracker receives the instruction and confirms the user password correctly, substitutes the new number for the existing number. After success, it will send the confirmation messages (SET USER NUMBER (1-3) OK) to the sender.

2. Change the user password of TLT-2H

Format: 777+new password (4 figures) +old password (4 figures)

eg: 77712340000

Explanation: When TLT-2H tracker receives the SMS and confirm the user password correctly; changes the new user password to the old password. After set successfully, it will send the confirmation messages (SET USER PASSWORD OK) to the sender.

3 GPS State Configuration instruction

GPS will enable on the on / off / adaptive three work states by send text messages command. GPS state is open after factory settings or reset.

3.1 Open the GPS instruction

Format: 222+user password (4 figures)

eg: 2220000

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, opens the GPS power. After the success, it will send the confirmation messages (GPS ON OK) to the sender.

3.2 Close GPS instruction

Format: 333+ user password (4 figures)

eg: 3330000

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, close the GPS. After the success, it will send the confirmation messages (GPS OFF OK) to the sender.

3.3 Adaptive GPS instruction（Power-saving Function）

Format: 100+ user password (4 figures)

eg：1000000

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, it will close the GPS immediately, and send the confirmation messages (VIBRATION SENSOR ON OK) to the sender. The tracker built in vibration sensor, once monitors the track movement for change to open the GPS. If in 5 minutes, with not monitors the track changed in the movement to close GPS.

Note: If a long time on the highway or the flat road, the GPS may be in sleeping, and will not be awakened. Users can send 222 + user passwords to re-open the GPS.

4, GPS special power-saving mode

1) Special power parameters

Instruction format: 199 + user password + Xxx + Lyy + Hzz

example: 1990000S030L01H03

Description: S030 that off GPS 30 minutes, and can be set (1 255). Open the GPS that the first phase of L01 is 1 minute, can be set (1 ~ 98), the first stage if the second stage is not positioned directly off GPS; if not positioning the first stage, the second phase, H03 GPS represents the total time for the opening, that the second phase of 2 minutes (ie Hzz-Lyy), you can set (3 ~ 99). When S is set to 0, then exit the power saving mode automatically switches to the GPS normally open mode, that is, 188 command will not work. When the module receives the instruction to confirm the user password is correct, according to the user to set parameters to configure the S / L / H items, after the success to send the confirmation message: GPS AUTO MODE: (yy-zz) / xxx Minutes.

Note: (1) Set S / L / H and other parameters, if the high is 0, then we must make zero. For example: To turn off gps30 minutes will set the S030, but not set to S30.

(2) Hzz opened GPS to set the total time, not less than Lyy.

(3) 199 instruction set of the parameters are not lost restart, the reset will not change until reset.

(4) Only in exceptional power-saving mode, the device can be set in accordance with the parameters of the timer switch 199, GPS, other modes will not.

2) Special power saving mode is on

Instruction format:188 + user password

for example: 1880000

Description: 199 instruction set when the device is successful, send 188 commands to take effect. When you receive the confirmation code 188 instructions correctly, to switch to GPS mode power saving mode, the sender replies to the confirmation message: GPS AUTO MODE ON OK. After entering power-saving mode, the device 199 in accordance with the parameters set by instruction time switch GPS, in order to achieve power saving purposes. Such as setting 1990000S030L01H03, sending 188 to enter this mode, the device according to the 199 instruction set, turn off the GPS 30 (S030) minutes, and then open the 1 minute (L01), if the GPS in the open for 1 minute (L01) localization, directly off GPS 30 min (S030). If a minute (L01) did not locate, will continue to open the GPS 2 min (H03-L01). 2 minutes regardless of whether the GPS positioning, all will be closed again for 30 minutes, again and again.

Note: (1) switch to power saving mode GPS work, you must first set the command parameters 199.

(2) Open the power-saving mode, off the stage in the GPS, GPRS sampling time and historical data are uploaded will stop; in GPS positioning if the open stage, GPRS uploaded regularly and historical data sampling will be back to normal.

(3) Open the power-saving mode, the GPS off stage, whether text mode or GPRS mode, the location information if the request operations, such as 666, # 806, phone positioning, SOS, 4XX, then the GPS would be immediately Open, read the latest GPS data until the arrival of the next power cycle, and then turn off GPS.

(4) If you need real-time tracking, please use the GPS normally open mode.

4. **Single localization request instruction**

Format: 666+ user password (4 figures)

eg: 6660000

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, reads the GPS information. No matter whether effective, the information with the replying base station which is the set of the original software will be sent to the sender.

Data format:

Lat: Latitude Direction (+/-) Latitude Value (Accuracy for 5 after the decimal point)

Long: Longitude Direction (+/-) Longitude Value (Accuracy for 5 after the decimal point)

Speed: Speed KM/H (Accuracy for 2 after the decimal point)

Direction: Direction (Accuracy for 2 after the decimal point)

Date: Date YYYY-MM-DD

Time: Time HH：MM：SS (GMT)

BS: Base Station information

Fix: Location state (A/V)

ID: IMEI

STATE: Message state

Effective data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

ID: 353686009002030

STATE: SMS

Invalid data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: V

ID: 353686009002030

STATE: SMS

Note: If the cold start and the GPS does not locate, then return invalid information is shown below.

Example: GPS UNAVAILABE, PLEASE TRY AGAIN LATER

5. Change The GPRS User Name

Format: #801#user password#new user name##

eg：#801#0000# username##

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, changes the user name to the new user name. After the success, it will send the confirmation messages to the sender. The content is “CHANGE USERNAME OK”.

6 Change The Service Password

Format：#802#user password#new service password#old service password ##

eg：#802#0000#1111#0000##

Explanation: When TLT-2H tracker receives the instruction, confirms the user password and old service password correctly, changes the service password to the new service password. After the success, it will send the confirmation messages to the sender. The content is “CHANGE PASSWORD OK”

7. Upload The Location Instruction At Once

Format：#806#user password##

eg：#806#0000##

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, sends the confirmation messages to the sender. The content is “START GPRS UPLOAD”. At the same time, send the data from the memory block to server.

Upload format:

#IMEI # user name #service password #condition

data quantity #the base station’s information $ GPRMC…….. # the base station’s information $ GPRMC…….

eg:

#123456789000001#TLT-2H#0000#SMS#3

#25ee0dff$GPRMC,083945.180,A,2233.4249,N,11406.0046,E,0.00,315.00,251207,,,A*6E

#25ee0dff$GPRMC,083950.180,A,2233.4249,N,11406.0046,E,0.00,315.00,251207,,,A*6E

#25ee0dff$GPRMC,083955.180,A,2233.4249,N,11406.0046,E,0.00,315.00,251207,,,A*6E ##

Attention : Immediately upload data format for the state: SMS

8. Calling switch Instruction

Calling OFF format: 150 + user password (4 figures)

eg: 1500000

Calling ON format: 151 + user password (4 figures)

eg: 1510000

Explanation: When TLT-2H tracker receives the instruction to close calling and confirms the user password correctly, close the calling function (including the SOS, alarm when across the fence), after successfully, sent the confirm information "SET VOICE CALL: OFF" to the sender. When TLT-2H receives instruction to open calling and confirm the user password correctly, open the calling function (including the SOS, alarm when across the fence), after successfully, sent the

confirm information "SET VOICE CALL: ON" to the sender.

9. Upload The Call

Explanation: One of 3 telephone numbers stored in advance calls in, hangs up after ringing 2-5 times. Dispose as 5.6， the state item automatically updates STATE: CALL.

10 Upload The Emergency Case

Explanation: When press the SOS key more than 3 seconds, it will do like 3.2.10 instruction, the information state item automatically updates STATE: SOS. At the same time, it will call the first preset user telephone number. If it is unsuccessful (closed or unable to connect or no response), starts calling the second and the third in turn.

Note: If the calling state is off, it will not call the user telephone number, and only send messages to the server.

11. Alarm When Cut Off Power Function

1. Open command o: 011 + user password

eg: 0110000

2. Close command: 010+user password

eg: 0100000

Description: When the TLT-2H receive the armament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information "DEFENCE ON", into the armament state after 10 seconds. When the main external power supply was illegally cut off, the TLT-2H will automatically send the current location information format as 4.1.6 to the 3 preset numbers, STATE items for: DEF. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), starts calling the second and the third in turn. When the TLT-2H receives the disarmament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information "DEFENCE OFF", repeal disarmament. TLT-2H is no longer monitor the illegal cutting external power supply case.

Note: 1. After leave factory or reset, it is the disarmament state. It does not effect by boot until receives the command or reset.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the

preset number.

12. Electronic Geo-Fence Function

Electronic fence takes the set coordinates as the center, the set radius parameters to determine the scope of the fence. When open this feature, once the TLT-2H beyond the scope of the set fence, it will send location information as to 3.1.5 to the 3 preset numbers. The information state item automatically updates STATE: OS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

When the TLT-2H re-enters the fenced area, it will immediately send location information format 3.1.5 to the three preset numbers. The information state item prompts STATE: RS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

1) Set the scope of the fence

According to the input formats different of coordinates, user can choose the format as follows instructions to operate.

Format1：003+ user password E/Wdddmm.mmmmN/Sdd.mmmmRzzz.z

eg: 003xxxxE11406.0024N2233.4230R1

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Edddmm.mmmm is longitude information with units of degrees and minutes, and the ddd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Ndd.mmmm is latitude information with units of degrees and minutes and the dd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages “SET GEO-FENCE OK” to the sender.

Format2：004+ user password E/Wddd.dddddN/Sdd.dddddRzzz.z

eg：0040000E114.10004N22.55705R999.9

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Eddd.ddddd is longitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Ndd.ddddd is latitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages “SET GEO-FENCE OK” to the sender.

Format 3 : 005+User Password Rzzz.z

eg: 0050000R0.1

Note : When this unit receive this command and confirm the password is right. And read the Update gps data whether is available. If ok, take the lat/log to the coordination, and the R for The Radius, and also pen the Geofence at the same time. If the configuration is ok. The unit Will send "set geo fence ok " to the sender. If the update GPS Data void, the unit will give up and then red the next one, if the unit can't receive the data above 50sec, the unit will send A message to the sender which is "ERROR GPS DATA, TRY AGAIN LATER"

1.1>. Open the electronic fence: 211 + user password

when the TLT-2H received confirmation of the order after the user password open the e-fence to the right side to return the confirmation messages sent: GEO-FENCE ON.

1.2> turn off the electronic fence: 210 + user password

when the TLT-2H received confirmation of the order the correct user password and close the electronic fence to return to the sender is recognized short message: GEO-FENCE OFF.

Note: 1, the fence can not exceed the radius of the domain, the fractional part of the right of zero must enter zeros. For example: R = 1, must be entered as 1.0.

2, if the calling state is off, it will not make calls, only send messages to the user.

3, the degree and is divided into 60 hex conversion, that 1d = 60m.

2> set the rectangular range of the electronic fence

Instruction format: 006 + user password + GX, IO / I / O, E / W longitude limit + N / S latitude limit, E / W longitude limit + N / S latitude limit

for example: 0060000G1 , IO, E114.10004N22.55705, E115.10006N23.55706

Description: GX, said the electronic fence X, X range【1,16】. IO fencing in and out of all alarms; I selected as a finalist alarm; O as a fence alarm. Latitude and longitude values in degrees, decimal point to be retained after five, followed by zero can not be omitted. IO: fences are out of the alarm; I: Finalist bar alarm; O: a fence alarm;

When the device receives the instruction to confirm the user password correctly, the sender returns confirmation messages: SET SQUARE GEO-FENCE GX (IO / I / O) OK.

Note: (1) is set up, automatically open the fence, then the default fence type I0: out of the fence are the police.

(4) If the calling state is off, it will not make calls, SMS mode, only send messages to the user.

(3) The setting of this directive, and the switch from power-down effect of changes until you receive further instructions or reset operation.

(5) (4) After reset, the value of latitude and longitude marked with 0. Fence is turned off.

2.1> Open rectangular electronic fence

Open all rectangular electronic fence instruction format: 311 + user password

for example: 3110000

Open a single rectangular electronic fence instruction format: 311 + user password + GX

for example：3110000G5

Description: This command is used to open all the electronic fence and open a single rectangular rectangular electronic fence, GX means that an electronic fence X, X range【1,16】. When the device receives the instruction correctly recognized the user password to open the electronic fence sender rectangular return confirmation messages: Open all rectangular electronic fence resume SET ALL SQUARE GEO FENCE: ON; open a single rectangular electronic fence to SET SQUARE GEO FENCE GX: ON.

2.2> closed rectangular electronic fence

Turn off all electronic fence rectangular Format: 310 + user password

for example：3100000

Electronic fence off a single rectangular Format: 310 + user password + GX

for example：3100000G5

Description: This command is used to open all the electronic fence and open a single rectangular rectangular electronic fence, GX means that an electronic fence X, X range【1,16】. When the device receives the instruction correctly recognized the user password to open the electronic fence sender rectangular return confirmation messages: Open all rectangular electronic fence resume SET ALL SQUARE GEO FENCE: OFF; open a single rectangular electronic fence is SET SQUARE GEO FENCE GX: OFF.

Note: If you set multiple alarms occurred while rectangular enclosure, the priority call G1 fence, fence G2, G3, G4 ... ... only to send the relevant location information, not make the call. Factory configuration and reset, the default state for the RS.

13. Open the Electronic Fence:

Command : 211 + user password

After set successfully, it will send the confirmation messages “GEO-FENCE ON” to the sender.

14. Close the Electronic Fence:

Command : 210 + user password

After set successfully, it will send the confirmation messages “GEO-FENCE OFF” to the sender.

15. Cut-Off Electricity And Oil Function

a. Command format: 900 + user password

b. Confirm command format: 901 + user password

Description: Due to the command with a certain degree of risk, so needs to do a more confirmation operation. When the user need to cut-off electricity and oil, using a mobile phone to send format a command, the device will return to: "Confirm Power OFF?" after it receives the order and confirm the user password correct. If it receives the user sending format b command in ten minutes and confirms password correct, white (purple) wire will output low level in order to control the outside relay to cut off oil and electricity and back to confirm SMS: POWER OFF OK.

2. Cut-off electricity and oil function to recovery command

a. Recovery command: 902 + user password

b. Confirm the recovery command: 903 + user password

Description: When the device receives the cut-off electricity and oil function to recovery command by the preset user numbers and confirms the password correct, will send the confirm information "Confirm Power ON?" to the sender, and then prepares to receive the confirm command. If within 10 minutes the device receives the users confirm command, white (purple) wire will output high level in order to control the outside relay to recover oil and electricity. After completion, send confirmation message "POWER ON OK" to the user.

Attention: this function is certain risk, it's will happen traffic in the freeway if you send this command, so please consider again and again.

16. **Overspeed Alarm Function**

Format:#122#Password#X##

Eg: #122#0000#250##

Note : X is mean reference value, and the unit is mail/hours(KM/H), the area is (0,999), when the unit receive this command and confirm the password is correct, Then implement this command. X=250 is mean that when the speed of the car is Above 250KM/H, the unit will send a message to the threes users ,the format is like 4.1.6 and the state is "OVER SPEED". At this time, if the speed of the car is lower as 250KM/H, then the unit will send a message to the send which the state is "SAFE SPEED"

When you set the X==0, and at this time, the unit will close this function, when you set the X≠0, open this function, and then send a message to the sender which is "SET RATE LIMIT:X"

17. U**pload the history data**

Record the history data:

If you want to use this function in SMS Mode, you need to change the mode in GPRS and set the IP, APN, the detail way you can see the manual.

1, configuration

Format : #807#user password #X##

Note: X is frequency, the area is (0,999), the unit is "second". When the unit receive this command and confirm the password is right. And set the history frequency is X. When the X=0, that's close the function. If X=30, that's mean that the unit will save the data every 30se, if the command is ok, then send "SET SAMPLEING OK" to the unit.

Attention :

1, the memory of every data is 100B, the unit can save about 3000PCS Data.

2, when the data is above 3000PCS Data, the new data will recovery the old data automatically.

3. If the Move Sensor is open already, and the car is always stop , the History Record will close automatically until the unit is wake.

Upload the history data
A: upload the history data of 24h
Format : #808#user password #24##
When the unit receive this command and confirm the password is correct, then send "START UPLOAD ALL HISTORY RECORD" and then send all of the data to the server. The format is like 1.1 state is "STORAGE"
Read all of the history data
Format : #808#user password##
When the unit receive this command and confirm the password is correct, then send "START UPLOAD ALL HISTORY RECORD" and then send all of the data to the server. The format is like 1.1 state is "STORAGE"

18. Low Voltage Warning

When the TLT-2H 's working voltage lower than the configuration, the unit will read the GPS information, whether or not effective, immediately the unit will send the format as 4.1.6 location information to the three stored numbers, the information state item automatically updates STATE: LP. Send a total of three times, each time one minute interval.

19. ACC detect charge function

1) For Charge

Description: TLT-2H check the state of ACC of the power through the ACC Cable,so the ACC ON when the car is moving, and the power of the car will recharge to the unit. and the ACC Off when the car is parking, and the power of the car will not recharge to the unit.

2)The On/Off Command for ACC State

Open Command of ACC State : 091+ Password
Eg :0910000
Close Command of ACC State : 090+ Password
Eg:0900000
Note: when TLT-2H receive the 091 command, and confirm the password is correct.TLT-2H will send a message to the sender what the content is "ACC STATE PROMPT:ON". when ACC is ON/OFF，the TLT-2H will send the current position to the pre-saved numbers whether the GPS Data is avaible or valid, and the state will display "AUTO START/AUTO STOP"be the ACC State.
when TLT-2H receive the 090 command, and confirm the password is correct.TLT-2H will send a message to the sender what the content is "ACC STATE PROMPT:OFF". when ACC is ON/OFF，the TLT-2H will not send any message whatever the unit is GPRS Or SMS Mode .

Attention : the default is ON, and once the configuration is ok whatever the unit is ON/OFF, the unit will not change until receve the next command or reset command

20. ACC Checking and Alarm for Moving

Alarm Command for Moving :008+Password+Rzzz.z

Close Alarm Command for Moving : 009+Password

Note: when TLT-2H receive 008 command, and confirm the password is correct,put Rzzz.z for the radius of area. the zone of zzz.z is 【0.1～999.9】, the unit is KM. after configuration is ok, TLT-2H will send "SET MOVE RADIUS OK"to the sender.

After configuration of the alarm for moving is complete, if TLT-2H checking the ACC State is changed which from ACC ON to ACC OFF, after three minutes, the TLT-2H will take the current position for the coordiration point, the unit will open the defence(use the zzz.z) whether the GPS Data is Available or Valid .

when the ACC is OFF, if TLT-2H checking the car over the defence,in the SMS Mode, the TLT-2H will send a message to the pre-saved numbers what the state is "STATE:ACC OS" (the unit will send the current position to the server,the state is "ACC OS",and call the pre-saved numers, the 150/151 comamnd will affect the unit that whether call the pre-saved numbers. if you reset the unit, the unit will only send message and don't call numbers) ,once the car coming the defence, the unit will send current position information to the server or send message and call the pre-saved numbers, and the state is "ACC RS"

Once TLT-2H checking the ACC state is close(from Open to Close), the Alarm for Moving will close automatically, when the ACC state is open(from Close to open), the Alarm for Moving will open automatically

When TLT-2H receive 009 Command and confirm the password is correct, the Alarm for Moving is closed automatically whatever ACC State is open or close unless send 008 command again. after you set 009 command, the utni will send "MOVE DEFENGCE:OFF" to the sender.

Attention : the Alarm for Moving of default is open, and the area is 500M

21. Invalid data is uploaded switch

Instruction Format: 08X + user password 4

Function: When the TLT-2H receiving the order, confirm the correct password, the setting is invalid according to the value of X data is uploaded switch state. X = 1, open the invalid data uploading. After the success of the sender set to send a confirmation short message: INVALID DATA UPLOAD: ON, at this time whether TLT-2H received GPS data is valid will be uploaded to the server. X = 0, close the invalid data uploading, set after the success of confirmation to the sender to send a short message: INVALID DATA UPLOAD: OFF, then close the invalid data upload, only upload valid data.

Note1: The factory set or reset state after the operation to stop uploading invalid data, set this

directive from the state of switch machine effect, until it received the relevant instructions to change again, or reset operation.
Note2: 1, this feature is only effective in GPRS mode
2, the default value is OFF.

22, remote upgrade instructions

1), command format:! - User password
For example:! -0,000 Description: When the TLT-2H receiving the order to confirm the user password is correct, the automatic restart and automatically log on FTP server to download program. When the update again after a successful reboot into normal use.
Note: FTP address is stored within the machine
2), instruction format:! - User password, FTP address, user name, password,
for example:! -0000, Igarin.gicp.net, tracker, trac
Description: When the TLT-2H received The instructions to confirm the user password is correct, the automatic restart and automatically log FTP address of the server download. When the update again after a successful reboot into normal use. Note: FTP address length 【5.35】, can also domain names, letters, numbers, dot (.) Underscore (_) and hyphen (-) form. User name FTP server user name, length 【3.20】; password for the FTP server password, length 【3.20】. User name and password, respectively, numbers and letters.

23, change the time zone settings instructions

Command format: 896 + user password 4 + D + NN
example: 8960000E08
Description: One user password for the four, D values of E, W, that the time zone thing, NN is a two-digit (1-12), that when code. When the product after receipt of order, confirm the user password is correct, after the success of products set to sender send a confirmation SMS TIME ZONE SET OK, CURRENT: DN, such as: TIME ZONE SET OK, CURRENT: E8. Such as setting 8960000E08, set the time and after the success of all relevant data to the GPS receiver on the basis of time plus 8, set 896000W07, set the time and after the success of all relevant data to the GPS receiver based on the reduction of time 7. Default output Greenwich time, if you set the parameters of NN for the 00 cases, product recovery output GMT

24. Location to return a single address instruction in Chinese

Instruction format 1: 667 + user password
for example: 6670000
instruction format 2: 667 + user password + MAP
example: 6670000MAP
instruction format 3: 667 + user password + MAP, WWW, HHH, ZZ
example: 6670000MAP, 640,480,15
Description: When the device receives the instruction 1, and confirm the correct user password immediately after reading the GPS information, recognition information is valid, send the address information to send the number of Chinese.
Such as: King East Road, Shenzhen, Guangdong Poly Garden East Gate south 339 degrees east within a distance of 31 meters. Send commands 2, will return a URL, open the URL you can see the

current location and a current position of the shots, screenshots default size is 240 * 320.
Such as:
http://www.gps069.com/cngps/mapaddr.asp?lng=114.09998&lat=22.55709&z=15&w=240&h=320
If you think the default screenshot is too small, you can send commands 3, you can customize the size and scale the screenshot, WWW is the width of the image, HHH for the picture height, ZZ for the zoom level. (Note: WWW, HHH's value is less than 1000. ZZ between the values proposed in the 1-20, adjust the ZZ can adjust the zoom level shots). Such as:
http://www.gps069.com/cngps/mapaddr.asp?lng=114.09998&lat=22.55709&z=15&w=640&h=480

25, a single positioning link back to Google Maps screenshot command

Instruction format 1: 668 + user password

for example: 6680000

instruction format 2: 668 + user password, WWW, HHH, ZZ

example: 6680000,999,999,15

Description: When the device receives the instruction 1, verify that the correct user password immediately after the read GPS information, recognition information is valid, send the current location of the Google Maps screenshot of the website, the screenshots default resolution of 240 * 320. If you think that image is too small, you can send commands 2, custom picture size, in which the representative picture of the width of the WWW, HHH on behalf of picture height, ZZ for the zoom level, you can set the size to comply with the resolution of your phone. (Note: WWW, HHH these two values can not be greater than 1000, ZZ between the values proposed 1-20) when the device receives the command, make sure the correct user password immediately after reading the GPS information, recognition information valid, send the current location of the Google Maps screenshot of the website, you set the capture resolution of the resolution. Screenshots URL example:

http://maps.google.com/maps/api/staticmap?center=22.557118,114.100010&zoom=15&size=240x320&markers=22.557118,114.100010&sensor=true

26, Single Location Google Maps Link back to command

instruction format: 669 + user password

for example: 6,690,000

Description: When device receiving the order, confirm the user password is correct, and immediately read the GPS information, recognition information is valid, send the current location Google Maps link to the number, then the user can through your PDA or smart phone access, view in Google Maps here.

Website Example:

http://maps.google.com/maps?f=q&hl=en&q=22.554765,114.104716&ie=UTF8&z=16&iwloc=addr

&om=1

Note: Due to domestic policies, so if in the country, the map will be biased.

Accessibility operation :

1、Command Resume : *RESET#0000##。
Note: use this command can resume to the initial configuration

2、Command Restart*RESTART#0000##
Note: this command only restart TLT-2V5, and don't restart the configuration

3、Read the present configuration
Command：*GTAS#
Note：when the unit receive this command, the unit will send all of the configuration to the sender
Format：
IMEI:Identity
MOD: point to point（ SMS P2P 2）/SMS（SMS SC）/GPRS
GPS:（ON）/(OFF)/(AUTO)
HFR: hand free
MTPRF: monitor（SILENT）/（NORMAL）
BS: basestation
GEO-FENCE=ON/OFF longitude,longitude data latitude, latitude data Radius （ at least

0.1KM）
GEO-FENCE STATE:RS/OS
DEFENCE：ON/OFF the switch of alarm when cut off the electricity
VOICE：ON/OFF the switch of calling
POWER：ON/OFF the switch of cut oil and power
RATE：XX overspeed
ST: the interval time when receive the position
TN: request number in the SMS Mode
GU:,GPRS user name, password
SRV: IP, Port

APN:,,GPRS port,APN user name , APN password
SAMP: sampling interval, the number of sampling (tracking when driving)
SAMP2：sampling interval, the number of sampling (tracking when vehicle stop)
HISTORY SAMP
4、 Read all of the number and password
Format：*GTAN#
Note：when the unit receive this command, the unit will send all of the number and password to the
sender including center number and center password and user number and user password.
Data Format：
U1: Number one, Password
U2:Number two, Password
U3:Number three, Password
SC:Center Number, Service Password

State mark

Status	Corresponding identity
666 one-time request	SMS
4XX regularly send	TIMER
Phone Location	CALL
Answer	ANSWER
Active assistance	SOS
Power failure alarm alarm	DEF
A fence	OS
Finalists selected	RS
Speed alarm	OVERSPEED
Safe speed	SAFESPEED
Historical Data Upload	STORAGE
Low power alarm	LP
806 single-hair positioning	SMS
From time to time to go car track	AUTO
From time to time stop throttling	AUTOLOW

Instruction Set

Instruction	Explain
700+ Password	Point to Point mode
710+ Password	GPRS mode
000+ Password	Close the handset
001+ Password	Open the handset

003+Password E/Wxxxx.xxxxN/Syyyy.yyyyRzzz.z	Fenced area set (in degrees minutes)
004+Password E/Waaa.aaaaaN/Sbb.bbbbbRzzz.z	Fenced area set (in degrees)
005+ Password Rzzz.z	Set the fenced area (the current location coordinates)
010+ Password	Turn power off alarm
011+ Password	Shut power off alarm
100+ Password	Power-saving features
#122# Password #x##	Set the speed alarm
150+ Password	Close Caller
151+ Password	Open calling
210+ Password	Close fence detection
211+ Password	Open fence detection
222+ Password	Open GPS
333+ Password	Close GPS
667+ Password	Back to the Chinese position information
667+ Password,MAP	Return address information plus screenshots Chinese
667+ Password,MAP,WWW,HHH,ZZ	Back to the Chinese address information plus screenshots (screenshot to change the size and scale)
668+ Password	Back to Google Maps Links Screenshots
668+ Password,WWW,HHH,ZZ	Back to Google Maps screenshot link (screenshot to change the size and scale)
669+ Password	Back to Google Maps link
4xx+ Password	From time to time point to point mode
666+ Password	Location to return a single user ID
777+new Password +old Password	Change Password
900+ Password	Pre-off fuel and electricity directives
901+ Password	Off oil and electricity directives
902+ Password	Pre-order to restore oil and electricity off
903+ Password	Order to restore oil and electricity off
940+ Password	Off oil motorcycle instruction
941+ Password	Single instruction to restore oil and electricity off
091+ Password	ACC to open command prompt switch state
090+ Password	ACC closed switch state command prompt
008+Password +Rzzz.z	Instruction set and open shift alarm
009+用 Password	Close shift alarm

* Stored number * Password * number **	Change GPRS User Name
# 801 # Password # a new user name# #	Change GPRS User Name
# 802 # service password new user password # password # the old service # #	GPRS service password change
# 803 # Password # APN # #	GPRS access point settings
# 803 # Password # APN # APN username password # APN # #	GPRS access point settings
# 804 # Password # fixed IP address and port # #	Set IP address and port number
# 805 # the user password for each sampling interval T # # # From the number of articles N# #	From time to time take the car to track mode settings
#806# Password ##	Request From Single Location
#807# Password #X##	Set the sampling rate history
#808# Password #24##	From the historical data 24 hours
#808# Password ##	From all the historical data
#809# Password #x#y##	From time to time set the throttle stop mode
*RESET# Password ##	Reset all the configuration information after reboot
*RESTART# Password ##	Restart device
*GTAN#	Read all the current numbers, passwords
*GTAS#	Read current settings
!- Password	Remote upgrade instructions
!- Password , FTP address, user name, password	Remote upgrade instructions
081+ Password	GPRS mode, open the invalid data upload
080+ Password	GPRS mode, close the invalid data upload

Reset Status List

Configuration items	Status	Configuration items	Status	Configuration items	Status
Mode	Point to Point	Stored phone	air	Password	0000
GPS Status	Open	Time to send	Stop	The number of base stations	1
Power failure alarm	Off (disarm)	Monitoring functions	Close	Electronic fence	Close
Service center number	air	GPRS Password	0000	GPRS user name	V500

ANP	CMNET	IP Address	0.0.0.0 0000	Shift alarm	Guan
Calling switch	Open	Off fuel and electricity	Open (non-breaking oil and electricity)	Speed alarm	Close
Historical data sampling	Stop	Historical Data Upload	Stop	Parking throttle upload	Stop
ACC switch status Tips	Open	Invalid data upload	Stop	Go cart track upload	Stop